

WHAT IS CLAIMED IS:

1. A connector, comprising:  
  
a housing having a mating face configured to join a mating connector;  
  
a contact held in said housing proximate said mating face; and  
  
a gel material provided on said housing between said contact and said mating face, said gel material including a self-sealing slit formed in said gel material, said slit being configured to accept the mating connector and, when the mating connector is removed, said slit closing to seal said contact.
2. The connector of Claim 1, further comprising a dielectric member accepting therein said contact, said dielectric member having an open face covered by said gel material.
3. The connector of Claim 1, wherein said gel material constitutes a planar layer of pre-cured gel placed over said mating face of said housing.
4. The connector of Claim 1, further comprising an annular dielectric shell having a channel therein, said channel receiving said contact, said channel having a rear end that retains an annular seal that is configured to prevent entry of fluid into said rear end.
5. The connector of Claim 1, wherein said housing further comprises inner and outer shells separated by a gap that is configured to accept an envelope of a mating connector, said inner shell having a mating end that is covered by said gel material.
6. The connector of Claim 1, wherein said housing comprises multiple chambers therein that holds respective contacts, said gel material overlaying an open end of said chambers and having slits aligned and overlapping corresponding said chambers.
7. The connector of Claim 1, further comprising a terminal position assurance (TPA) member mounted over said contact and said gel material, said TPA member having an opening therethrough aligned with said contact and said slit in said gel material.

8. The connector of Claim 1, further comprising a dielectric member surrounding said contact and a terminal position assurance (TPA) member, said gel material being sandwiched between said TPA member and said dielectric member.

9. The connector of Claim 1, wherein said gel material has a plurality of separate and discrete slits formed therein, each of said slits being aligned with a corresponding one of a plurality of said contacts.

10. A connector assembly comprising:

a plug holding a plug contact; and

a receptacle holding a receptacle contact, said receptacle having a gel material provided on said receptacle over a face of said receptacle, said plug contact piercing said gel material when said plug and receptacle are joined, said gel material re-sealing when said plug contact is removed.

11. The connector assembly of Claim 10, wherein said receptacle includes a dielectric member surrounding said receptacle contact, said plug having a shell that sealably encloses said dielectric member when mated.

12. The connector assembly of Claim 10, wherein said gel material constitutes a planar layer placed over said face of said receptacle.

13. The connector assembly of Claim 10, wherein said receptacle further comprises an annular dielectric shell having a channel therein, said channel receiving said receptacle contact, said channel having a rear end that retains an annular seal that is configured to prevent entry of fluid into said rear end.

14. The connector assembly of Claim 10, wherein said receptacle housing further comprises inner and outer shells separated by a gap that is configured to accept a shroud formed on said plug, said shroud surrounding said plug contact, said shroud being sealably received between said inner and outer shells.

15. The connector assembly of Claim 10, wherein said receptacle retains multiple receptacle contacts and said gel material includes multiple corresponding slits overlaying said respective multiple contacts, said slits remaining closed in a fluid tight manner until mated with said plug.

16. The connector assembly of Claim 10, wherein said receptacle holds a terminal position assurance (TPA) member mounted over said receptacle contact and said gel material, said TPA member having an opening therethrough aligned with said receptacle contact and a slit formed in said gel material.

17. The connector assembly of Claim 10, wherein said receptacle further comprises a dielectric member surrounding said contact and a terminal position assurance (TPA) member, said gel material being sandwiched between said TPA member and said dielectric member.

18. The connector assembly of Claim 10, wherein said gel material has a plurality of separate and discrete slits formed therein, each of said slits being aligned with a corresponding one of a plurality of receptacle contacts.

19. The connector assembly of Claim 10, further comprising wires attached to said plug and receptacle contacts, respectively, said wires passing through rear openings in said plug and receptacle, said wires being surrounded by annular seals to form water tight seals between said wires and said plug and receptacle.